Medical

19.12.16

PRESERVED

G. R. S. IX-5]

Previous references.

File No. 135-15

Serial Nos. 1-3

1916.

(Medical)

Later references.

Returned

11 a'

31-5-34

GENERAL AND REVENUE SECRETARIAT.

Serial Nos. 1-3

Part B for November 1916.

SUBJECT.

Note by Mr B. K. Narayana Rao re: investigation into the Health of Children in Schools in the Nilgiris city.

Papers ended - The Senior Surgeon who was consulted in the matter, reporting that the lines of work already approved in G.O. No. 5220-60 dt. 24.3.16. Edn 164-14-2 call for no addition or amendment in the light of the note prepared by Mr Narayana Rao.

W D 68—GPB—50,000—24-7-16

M R Jaresan
13/12/16

30

G. R. S. 11] 1915-6

GENERAL AND REVENUE SECRETARIAT.

(Medical)

NOTES.

File No. /35-15

FILE HEADING.

Note by Mr B. K. Narayana Rao re: investigation into the health of Children in Schools in the Mysore City

From

Mr B. K. Narayana Rao Asst Surgeon

No.	Dated	Received

Diary No.	Enclos.	Spare Copies.	Serial No.
4638			1

BRIEF ABSTRACT OF LETTER.

Copy of a note prepared by Mr B.K. Narayana Rao Asst Surgeon embodying his proposals for an investigation into the health of Children in Some Schools in Mysore city

NOTES AND ORDERS.

[P.J.O]

NOTES—First Sheet.

To No. 1571
26.6.16

Medical 135-15-1
D 4638

W. D. 791—GPB—2,000—2-10-15

REPLY.

(To be written on this margin.)

Office of the Dewan of Mysore.

NOTE.

Dated June 1916.

Copy of a note prepared by Mr. B.K.Narayana Rao, Assistant Surgeon, Mysore embodying his proposals for an investigation into the health of children in some Mysore City Schools.

****

Forwarded to the Secretary, General Department, for favour of consideration in the Medical Department.

14.6.16

The Secretary,

General Department.

G. R. S. 12]

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General and Revenue Secretariat.

Med File No. 135 of 1915-6

Serial No.

Mr. Narayana Rao's note may, if approved, be sent U.O. to the Chief Senior Surgeon for Consideration of the proposals therein contained and suggestions as to the lines on which action is called for.

Adm-39 29.6.16 Bs 30/6

2) An order has recently been issued in Branch VI (Fr. No. 5220-68 Edn. 164-14-2 dated 24.3.1916) laying down instructions for a systematic examination of pupils in Head-Quarter Towns. No further action on the present reference seems therefore necessary. It may however be transferred to Branch VI for further consideration, if any, and disposal.

Bs 30/6

3) In the Director's order to Senior Surgeon forwarded copy of note for consideration in the Med. Dept & then transfer file to Br VI for note & return

30/6-16

4) Draft submd.

Adm-39 1.7.16 Bs 1/7

5) Issue + resubmit

1/7 16

NOTE—Contn. sheet.

GPB—70,000—17-12-15

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General and Revenue Secretariat. | Med. File No. 135 of 1915-16.

Serial No.

mis 57-16
E+A.

2 6) To the Senior Surgeon. No. 238 dated 11-7-16 forwards a copy of Sl. 1 for consideration and suggestions, if any.

7) File sent Branch VI for note and return (Vide Asst Secretary's order in para 3 above).

Adm-39
19.7.16
Br
25/7

VI

8) ~~Br VI~~ Nor VI might be requested to send up this file after the opinion of the Senior Surgeon is received perhaps to see if any further modification of the order already issued re Medical examination of school boys in Dist Head Quarters towns is necessary. Nor

Or
20/7

VD
21/7/16

9) Papers. Secy

Secy
22/7

10) They be sent to 1st Member for perusal - It is all a Question of money - We want to have medical examination without much expense

First Member

309
28.7

11) Secy

Secy
31/7

12) Branch VI and Secy.

29.7

GPB—70,000—17-12-15

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G. R. S. 12]

General and Revenue Secretariat. | Med File No. 135 of 1915-6

Serial No.

13) Letter no: G-C 55-2 dt 6.11.16 from the Sanitary Commr in Mysore.

3. States with refce to sl 2 that the lines of work already approved in G.O. no: 5226-63 dt 24.3.16 Edn 164-14-2 call for no addition or amendment in the light of the note prepared by Mr Narayana Rao.

14) The papers may, if agreed, be filed after perusal by Branch VI of the Extraordinary member. (Vide paragraph 8 of the rules above).

Edn-39
10.11.16

15) For perusal & returns

Br
14/11

D. M.
16.11.16

Recd 15.11.16

Br: VI.

(Illegible)

16) For information

Secy)

17.11

17) Ref? with records

Br IV)

18/11

18) Second Member for kind perusal

Br
22/11/16

19) Submd.

D. M.
23.11.16

376
24.11.16.

II Member)

Secy

Yes only
25/11
may be
destroyed.

D. M.
29.11.16

NOTE—Contn. sheet

GPB—70 000—17-12-15

AN EXPERIMENTAL INVESTIGATION INTO THE HEALTH OF CHILDREN IN SOME MYSORE CITY SCHOOLS.

---------oooOooo--------

Medical 135=15=1.

D 4638

By B.K. Narayana Rao,

MYSORE.

During 1913 & 14, while working in the Eye and Throat ---- Hospitals of London, I had many opportunities of treating large numbers of children sent by County Council School Authorities on the advice of Medical Inspectors. By the courtesy of certain school Medical Officers and consultant Surgeons I had chances of observing their --- methods of inspection and record, their modes of picking out defective children requiring special education, of how institutions as Myopia -- classes, open air classes, backward classes, and such like were con--ducted and also of seeing how smoothly even their elaborate school Medical System, was worked with the sympathetic co-operation of --- various citizens.

When an ophthalmic department was newly opened in Mysore at the beginning of this year, and work was growing, I utilised my leisure hours in examining the health of school children - with a view to find out—

(1) If any systematic Medical inspection of scholars was neces--sary among us.

(2) If so, to what extent,

& (3) Methods to be employed, finance agency etc.

Such an investigation appeared to me valueable in view of the fact that His Highness's Government had graciously passed the com--pulsory Education Act - similar to the English Act of 1907 which in that country was followed by the introduction of systamatic Medical Examination of Scholars.

Methods Employed. By the kindness of the veteran education Mr. Venkatakrishnayya, who gave me every assistance, the work was com--menced in his school - the Narimallappa's High School. A room -- about 25ft x 12ft was put at my disposal from 2 to 5 P.M. every work--ing day. The examination was arranged so that no student lost -- class for more than 10 minutes and so that no disturbance was caused to neighbouring class rooms. The examining room was fitted with all

P.T.O.

all necessaries such as Tape, Wash basin, Weighing machine, Vision -- Chart, Ear, Nose and Throat instrument etc., etc., regarding every student the following items of information were obtained.

1. Name, 2. Age, 3. Caste, 4. Weight, 5. Height, 6. Chest, -girth and expansion, 7. Skin condition and any verminous condition of hair, 8. Vision - for each eye recorded separately. Any external eye disease, 9. Ears - their healthy condition and hearing, 10. Teeth -- condition, 11. Nose and throat - condition - any granules or mouth -- breathing, 12. Condition of internal organs - heart, lungs, spleen, liver, &c. Any deformity or other notable points..

In case of requiring detailed examination the student was asked to go to the Hospital where he was examined. During the examination a general conversation was kept up and much valuable information about the home and environs of the student would be obtained -- which often elucidated certain physical conditions. In the cases of very small children who had not yet learnt the alphabet the vision -- test was omitted.

By the courtesy of the Training College authorities, I could examine a number of Elementary School teachers in training besides a few teachers in other schools.

Results obtained. The results are tabulated as follows:-

S T A T E M E N T A.

List of Schools and number of School Boys Examined.

No.	Name of School Examined.	Nature of School	Number Examined.
1.	Narimallappa's High School.	Aided Private.	340.
2.	Sarada Vilas Patasala	-Do-	261.
3.	Ittigeud A.V. School	-Do-	44
4.	His Highness's Body Guard lines A.V. School.	Govt.	38.
5.	Training College.	-Do-	56.
		Total	759.

(8)

S T A T E M E N T B.

Percentage of Defects and Diseases Discovered.

No.	Defect or Disease Discovered.	No. Affected.	Percentage of Total. (703)
1.	Verminous conditions & skin diseases.	48	6.0 per cent.
2.	a. Dirty and ill kept teeth	108	15.4 "
2.	b. Diseased teeth, caries, cavities etc.	113	16.1 "
3.	Visual defects	69	9.8 "
4.	External Eye diseases ..	21	3.0 "
5.	Wax in Ear	75	10.7 "
6.	Ear Diseases & defects of hearing.	26	3.7 "
7.	Defects & diseases of Nose and Throat	23	3.3 "
8.	Diseases of internal organs lungs etc.	8	1.1 "
9.	Enlargement of Spleen ..	17	2.4 "
10.	Debility and Anaemia ..	18	2.5 "

S T A T E M E N T C.

Percentage of Defects & Diseases arranged according to Classes.

No.	Class Groups.	Total Examined.	Teeth Defects.	Ear Troubles	Vision Defects.	Skin Troubles.
1.	Small children Man. Classes & Eng. 1st Class.	179	21.3	4.5	4.4	7.2
2.	Eng. 2nd Class & 1st Form.	209	16.7	4.4	3.7	3.3
3.	2nd & 3rd Forms.	231	13.7	3.0	12-5	9.1
4.	High School Classes	84	9.6	2.4	16.8	4.8

S T A T E M E N T D.

Of Defects and Diseases among students Arranged according to Castes.

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S T A T E M E N T D.

of Defects and Diseases among Students

Arranged according to Castes.

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No.	C a s t e.	Total Examined	Vision. Defects.	Ear.	Teeth	Spleen.	& Genl. Debility
1.	Brahmins	438	10.3	4.6	11.1	1.0	
2.	Lingayats	68	7.3	nil	19.1	3.0	
3.	Non-Brahmin Hindus	185	10.8	6.0	20.1	6.5	
4.	Mohamedans	12	nil	nil	8.5	0.5	

S T A T E M E N T E.

Defects and Disease among Teachers Examined.

No.	Defect or Disease Discovered.	No. Suffering.	Percentage of Total Examined 59.
1.	Skin troubles..	nil	nil
2.	Disease of the Teeth	15	25.4
3.	Vision Defects	21	35.6
4.	External Eye diseases	nil	nil
5.	Ear diseases and defects ..	nil	nil
6.	Defects and diseases of nose & throat.	nil	nil
7.	Diseases of internal organs as heart, lungs etc. ..	1	1.7
8.	Enlargement of spleen	nil	nil
9.	Debility and anaemia	3	5.0

S T A T E M E N T F.

Comparison between these figures

and those of other places.

No.	Defects or Disease.	Bombay Corporation	New York. Year 1910	England 1909 Thresh 40000	Mysore Figs.
1.	Vermincus Condision & Skin troubles	in			
2.	Vision Defects. ..				
3.	External Eye Diseases				

(10)

S T A T E M E N T F.

Comparison between these figures

AND THOSE OF OTHER PLACES.

No.	Defects or Disease.	Bombay Corporation.	New York year 1910.	England 1909 Thresh 40000.	Mysore figs.
1.	Verminous condition & skin troubles.	8.0 %		19.9	6.0
2.	Vision Defects ..	10.0	11.0	13.0	9.8
3.	External eye diseases	20.0			3.0
4.	Teeth Troubles ..	33.0	35.6	8.0 (one form)	16.1
5.	General Debility ..		4.6	3.7	2.5
6.	Nose & throat troubles	20.0	19.0		3.3
7.	Spleen enlargement	3.0			2.4

CONCLUSIONS. Though it is unwise to draw conclusions from so meagre statistics, yet it may give some idea of the direction in -- which our energy might be best used. Among us the low percentage -- of skin diseases and verminous conditions is striking. This is pro--bably - at least partly - due to climatic advantages. We have here neither the great cold which makes a hot bath a luxury nor the great heat with its tendency to poor covering, dirt and skin troubles. Ex--ternal eye diseases are at a low figure - of course partly due to the examination being conducted at a season when sore eyes are uncommon - but mostly due to practically dustless streets and thoroughfares and non-congestion of population. Vision defects are fairly large but not so large as in western countries. It has been stated (Von -- Muehs) that vision defects gradually increase with civilisation and that countries which are more literate have a correspondingly higher -- percentage of vision defects. If this is true, as it appears to be from certain statistics, then we have only to attempt remedying an -- inevitable disadvantage. We have a fairly large number of cases of Chronic Malaria with Enlarged spleen and this number in the malnad -- parts would certainly be very high. There are also some debilitated anaemic children - the condition being due to malnutrition, previous illness and so on.

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Dealing with classes, we find vision defects gradually increase with progress of education, so much so that High School boys had vision defect to the extent of ...16:8... percent. Certain well informed -- educationists of Colleges opine that vision defects are probably very great in the College classes. My experience also indicates that it is very likely. Ear and Throat troubles gradually lessen with higher -- classes as these affectionsare generally complication of certain --- diseases of childhood such as measles, Chicken pox etc. Teeth troubles are fairly largest at any stage, but in small children is very great and this, I think, is due to want of proper attention to teeth of children and the non-enforcement of regular habits by our young mothers.

Dealing with castes there is nothing noteworthy except that defects are only slightly greater in other Hindus than in Brahmins.

In order to compare with results in other parts of India, I wrote to various Medical & Educational authorities but with the exception of the Health Officer of Bombay who sent a copy of their report of work done - the others, Cochin, Travancore, Baroda, all wrote that there was no such routine work being carried out.

POINTS OF INTEREST IN THE ENGLISH SYSTEM.

How the compulsory Education Act was passed in ..... how its benefits were extended later, how it was followed by the equally beneficent measure regarding Medical Inspection of schools, how --- detailed instructions have been given by the Local Government Board in the form of circulars - are all matters which anybody interested in the subject can get access to. What I have not seen published in the -- usual reports is the unofficial connection which authorities connected with school Medical Inspection establish with philanthropic associations and thus produce enormous opportunities of good work all round. For example, in two places I found the school Medical Officer who was often in communication with various associations- co-operative and -- philanthropic. If a child were repeatedly found verminous or underfed, though such conditions were remedied by the Head Master himself by -- virtue of powerXs vested in him by the various Children's Acts, yet the visiting nurse was asked to report about the home conditions of the -- child and if it was found unsatisfactory may be by unemployment, sickness or drunkenness, then the Doctor referred the case to such ---

P.T.O.

such societies who gave employment gave immediate relief and so brought about a bettering of the childs home.

To return to our original questions- there can be but one -- answer to the query - Is Medical Inspection of scholars necessary? But to what extent is it necessary? There are certain diseases and defects which are prominent and children should be examined as regards these. Then, there are anthropometric measurements which are valu-able in estimating individual progress and are also useful in various ways in the form of collective statistics in the future. These -- require study and record. Other items do not appear to me worth -- troubling about. History of previous health of each child which is recorded in England and proves extremely valuable in preventing the spread of epidemics in schools - cannot be got accurately even from ~~the~~ educated parents and even if obtained in few cases here and -- there would be of no value for such preventive work. Again detailed investigation requiring the necessity of schools for backward children and open-air schools appear unnecessary. Thus what we chiefly require at present are:-

1. Anthropometric statistics of children such as height, weight, chest girth, dynamometry etc.

2. Vision test.

3. Inspection of Teeth.

4. Examination of ears and hearing - of nose and throat for -- enlarged tonsils and adenoids.

5. Examination to detect constitutional ill-health as examination of heart, lungs, spleen, liver etc.

<u>SUGGESTIONS FOR A SYSTEMATIC ~~EXAMINATION~~</u>

<u>~~OF~~ MEDICAL INSPECTION OF SCHOLARS.</u>

In forming any scheme three points are worth remembering.

1. That while in England all the scholars of a school are of practically one social class (forexample public schools like Eton & Harrow - 2ndlycounty council schools - 3rdlyschools for artisan children and so on) among us the schools are really democratic in -- spirit and the scholars come from all social classes. So the general suitability of any fixed set of rules to ensure cleanliness and --- general health would be less among us and individualism has greater

P.T.O.

greater scope.

2. That as much of the necessary work as can be done by the teachers themselves (under definite instructions and a little demonstration if necessary) must be left to be done by them.

3. The system of working should be as simple and as inexpensive as possible. All elaborate recording might be avoided.

AGENCIES REQUIRED:- The examination must be shared both by the teachers as well as the school doctor. Anthropometry and vision test can be easily done by teachers after a few minutes demonstration. The doctor can examine all children once a year regarding the other items. Such students only as are picked out by teachers as defective in vision may also be examined by him.

Regarding staff - for a city like Mysore with its 60000 students and a probable addition of about 450 every year - there might be a parttime Medical Officer assisted by a clerk and a peon. In smaller places the clerk may be omitted as some teacher or other can be easily got to enter a few records during the examination.

This staff should be maintained throughout the year as it is not likely that an Officer can examine more than 3000 or 4000 students a year working part-time.

FINANCE:- An allowance (conveyance and lecturing work) to the Officer of Rs.40/- a month in Bangalore and Mysore and Rs.25/- in other big towns. A clerk in these two cities at Rs.20/- each and a peon in each on Rs.7/- contingency Rs.3/-. Total per month Rs.70/- in the two cities and plus Rs.35/- in other places. This means an annual expenditure of Rs.4200/- not at all a high sum considering the results that ought to be

A levy of a fee on all scholars of three pies a month in the town classes and six pies in the higher would not be felt by the parents and would probably meet the greater part of the expenses of school medical inspection.

WORK TO BE DONE BY THE MEDICAL OFFICER.

1. A thorough examination of all the boy pupils of all schools up to the College classes once.

2. Vision test only of all College students once.

3. To give 3 courses of about 10 lecture-demonstrations each to

P.T.O.

to teachers in training.

(a) To undergraduate teachers in English.

(b) To upper secondary teachers in Kanada.

(c) To elementary school teachers in Kanada.

4. To compile during the 1st year - a very practical small guide in kanada for the use of teachers in villages and Taluk schools.

5. Compilation of statistics and report at the end of the year.

6. Institutions at intervals to teachers of each school (1 -- demonstration) as to how to do vision test (preliminary test.)

WORK TO BE DONE BY THE SCHOOL STAFF.

1. Anthropometric records - Height once a year, weight once every term and so on.

. Furnishing the Doctor with tabulated information regarding, Age, Caste, Income of parents, habits, intelligence etc., of the --- pupils.

RECORDS:- There need not be elaborate like the card system of England but results can be noted in books under several headings. Whenever a student leaves a school for another a Medical history certi--ficate may be sent along with his educational certificate.

APPARATUS ETC., NECESSARY:-

a. Every school should provide itself with:-

1. A weighing machine.

2. A height recording stand.

3. Eye charts.

4. Tape, basin etc.

b. Every examining Doctor should be provided with:-

1. Instruments of examination of nose, throat, mouth.

2. Basin towels etc.

3. Special eye charts etc.

TREATMENT OF STUDENTS. Those that are found defective may be given a ticket mentioning the item of defect. Such students may be examined in detail and treated at the Hospitals at conveniently -- arranged intervals. It is important to note how many of these --- defectives do resort to treatment.

P.T.O.

(15)

INSPECTION OF SCHOOL BUILDINGS,

FIXTURES, ARRANGEMENT OF CLASSES ETC.

These may be reported upon by the Medical Officer once a -- year with definite practical suggestions for improvement.

MEDICAL EXAMINATION OF SCHOOL GIRLS.

As this is likely to present various difficulties at stages, at which it will probably be most useful, systematic examination of -- girls may be ~~left~~ deferred for one year when experience in working the -- system among boys would have been gained.

Finally I have to thank the various School Authorities who kindly gave me every help for this investigation.

S 2-16-1

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G. R. S. 34j

No. 238 med 135-15-2 Censure.

GOVERNMENT OF H. H. THE MAHARAJA OF MYSORE.

General and Revenue Secretariat.

(Medical)

Office Memorandum.

To The Senior Surgeon

The 11-7- 1916.

The accompanying copy of a note prepared by Mr B.K. Narayana Rao Asst. Surgeon embodying his proposals for an investigation into the health of Children in Some of the Schools in the Mysore city is forwarded to the Senior Surgeon for consideration and favor of Suggestions, if any.

By order

For Secy to Govt

Edul dept

Edn-39
1.7.16

GPB—5,000—30-9-13

D/1444

Office of the Sanitary Commissioner
with the Govt., of Mysore,

No. G.C 55-2 Dated, Bangalore, 6th Nov 1916.

From

Rajakaryapravina Rao Bahadur
T.V.Arumugum Mudaliar Esq., M.B.C.M.,
Sanitary Commissioner to the Government of
H.H.the Maharaja of Mysore, Bangalore.

To

Med 135-15 81:3

D.M.Narasinga Rao Esq., B.A.,B.L.,
Secretary to the Government of H.H.the
Maharaja of Mysore, General Deptt.,Bangalore.

Sir,

With reference to your office Memorandum No.238 Med 135-15-2 dated the 11th July 1916 addressed to the Senior Surgeon forwarding for suggestions a note by Mr.B K.Narayana Rao, Assistant Surgeon, embodying his proposals for a medical inspection of school children, I have the honor to state that the lines of work already approved in Government Order No.5220-68 /Edn. 164-14-2 dated the 24th March 1916 call for no addition or amendment in the light of the Note prepared by Mr. Narayana Rao.

I have the honor to be,

Sir,

Your most obedient servant,

T.V.Arumugum

Sanitary Commissioner.

GPB—50,000—26-4-15

GEN. & REV. DEPT.

19 8 NOV 1916

From The Sanitary Commissioner in Mysore Bangalore

To The Secretary to Govt Genl: Dept Bangalore

Dated 6.11.16.

Despatched

Received

General No. C. 2552

No.

Enclosure No.

Stating that the procedure for medical Inspection of School Children already approved by the Government calls for no addition or amendment in the light of the Notes prepared by Mr. Narayana Rao